

REMARKS

The Office Action mailed January 12, 2010, has been received and carefully considered. The Office Action examines Applicant's elected Group I (a polymer blend and a film thereof, claims 1-5, 14, 15, 17, 18, 21, 22, 25, 28, and 30) with an initial species election (A) polyethylenepropylenedieneterpolymer, (B) polyamide (nylons), and (C) poly(styrene-co-maleic anhydride).

In this Amendment, the Title has been amended to be more descriptive. The required Substitute Specification is attached, as well as a marked-up copy of the Application as-filed showing the formal changes made in the Substitute Specification. Claims 1 and 3-11, and 13-22, and 24-30 have been amended, and claims 2, 12, and 23 have been cancelled without disclaimer of the subject matter thereof. The Abstract has been amended and is attached as a separate sheet.

To the best of the undersigned attorney's information and belief, the changes made herein contain no new matter for the reasons given in the remarks which follow.

Claims 1, 3-5, 14, 15, 17, 18, 21, 22, 25, 26, 28, and 30 are now active in the Application as having been elected in response to a restriction requirement and are submitted to be in allowable condition. Claim 1 is independent.

The claims of Group II (method of making and film product thereof, claims 6-11, 19, and 20) and Group III (separation membrane and use thereof, claims 12, 13, 16, 23, 24, 26, 27, and 29) have been withdrawn as non-elected in responding to a restriction requirement. These claims have been amended to include the limitations of claim 1 in view of which, upon finding claim 1 allowable, the Examiner is requested to rejoin the non-elected claims 6-11, 13, 16, 19, 20, 24, 26, 27, and 29 and to examine them in this Application.

Claim Changes and Support

The preamble of claim 1 has been amended to agree with the original Title and to recite, "Polymer composite blended mixture including a compatibilizer and having selective permeability to chemical permeants due to interaction differences between the compatibilizer and the chemical

permeants, the polymer composite comprising: ...". Support for this is found, for example, in the Title, in the paragraph bridging pages 1 and 2 of the Application, and in claims 13, 16, 24, and 27.

Claim 1 has been amended further to recite the limitations of claim 2 so that support is manifest.

Claim 1 has been amended additionally to recite the limitations of claim 12 so that support is manifest.

Claims 1-30 have been amended to correct inadvertent misspelling and to positively recite elements and steps. Claims 2-30 have been amended to agree with the changes made to claim 1 where needed.

I. The requirement that a Substitute Specification be submitted has been complied with. Grammatical, idiomatic, and formal changes to the Application have been made as required by the Examiner. To the best of the undersigned attorney's information and belief, the changes made contain no new matter.

II. The rejection of claim 26 under 35 USC §112, second paragraph, is submitted overcome by the amendments made herein to claim 26. Claim 26 has been amended to delete "such as clay".

III. The rejection of claims 1-5, 14, 17, 18, 21, 26/1, 28, and 30/1 under 35 U.S.C. §102(b) as anticipated by Watanabe et al. (US 6,397,912) is respectfully traversed for the reasons given in the following.

IV. The rejection of claim 1-5, 14, 15, 17, 18, 21, 22, 25, 26/1, 28, and 30/1 under 35 U.S.C. §103(a) as unpatentably obvious over Watanabe et al. (US 6,397,912) is respectfully traversed for the reasons given in the following.

Remarks Distinguishing Over the Prior Art (III and IV above)

1. Applicant believes that claim 1 as amended is clearly distinguishable from the

disclosure of Watanabe et al. because amended claim 1 now recites, *"Polymer composite including a compatibilizer and having selective permeability to chemical permeants due to interaction differences between the compatibilizer and the chemical permeants, the polymer composite comprising: an amorphous thermoplastic resin ...; a semi-crystalline polymer... dispersed in the amorphous thermoplastic resin to provide a dispersed phase having an interface with the amorphous thermoplastic resin; and ... a compatibilizer ..."*.

2. Watanabe et al. do not disclose and do not suggest such a polymer composite having selective permeability to chemical permeants due to interaction differences between the compatibilizer and the chemical permeants, such as gases.

3. The object of Watanabe et al. is to provide a pneumatic tire having an inner layer which has an elastomer dispersed in a thermoplastic resin. The inner layer prevents air from permeating through the layer.

4. The object of the polymeric composite of the present invention is to separate two or more chemical permeants, such as gases, by making one chemical permeant permeate through the polymer composite at one rate and other chemical permeants permeate at differing rates.

5. Additionally, the rubber of Watanabe et al. is dispersed in the thermoplastic resin and the whole matrix, including the thermoplastic resin, functions as a barrier. The present invention is distinguishable in that the semi-crystalline polymer is dispersed in the amorphous thermoplastic resin of the polymer composite, and the semi-crystalline polymer functions as a barrier and helps to separate gases.

6. Thus, Applicant believes that it is clear that the basic technical concepts of Watanabe et al. and the present invention are different, and that this distinction is made clear in claim 1 as amended.

7. Additionally, the compatibilizer of the present invention has different interactions with different chemical permeants so that the permeability of the membrane to respective chemical permeants is affected and a high separation performance is achieved. Such a dual action mechanism of a compatibilizer is neither taught nor suggested by the disclosure of Watanabe et al.

8. In view of the foregoing distinctions, Applicant believes that the disclosure of Watanabe

et al. does not anticipate the present invention according to claim 1 as amended, as well as the claims depending there from for analogous reasons, and this ground of rejection (III above) should be withdrawn.

9. Moreover, Applicant submits that one of ordinary skill in this art would find no teaching or suggestion in the disclosure of Watanabe et al. which would lead or motivate the artisan to modify the disclosure of Watanabe et al. in ways needed to meet Applicant's claim 1 as amended and the Examiner has given no line of reasoning for such modifications. In view of this, Applicant submits that the disclosure of Watanabe et al. does not render obvious the present invention according to claim 1 as amended, as well as the claims depending there from for analogous reasons, so that this additional ground of rejection (IV above) should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that elected claims 1, 3-5, 14, 15, 17, 18, 21, 22, 25, 26, 28, and 30 are in condition for allowance. Applicant therefore requests examination in turn of the remaining species and, when these are found allowable, rejoinder of non-elected claims 6-11, 13, 16, 19, 20, 24, 26, 27, and 29, and examination of these claims in this Application. Reconsideration and passage of this case to issue are therefore requested.

Should the Examiner consider that a conference would help to expedite the prosecution of this Application, the Examiner is invited to contact the undersigned to arrange for such an interview.

No fee is believed due. If any fee is deemed due, the Commissioner is hereby authorized to charge the same to our Deposit Account No, 18-0002 and is requested to advise us accordingly.

Respectfully submitted,



Steven M. Rabin. (Reg. No. 29,102)
Rabin and Berdo PC
CUSTOMER NO. 23995
1101 - 14th Street, N.W., Suite 500
Washington, D.C. 20005
Tel.: (202) 371-8976
Fax: (202) 408-0924

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Date

SMR/AJW:ac